

Marlene H. Dortch  
Secretary  
Federal Communications Commission  
445 Twelfth Street, S.W.  
Washington, D.C. 20554

June 15, 2004

Re: MM Docket No. 99-325

Dear Ms. Dortch:

On behalf of Duquesne University, licensee of WDUQ-FM, Pittsburgh, PA, I write in response to the Federal Communications Commission's Further Notice of Proposed Rulemaking in this proceeding.

WDUQ-FM is a Non-Commercial Educational FM station broadcasting at 90.5 MHz. Although WDUQ-FM has not yet commenced digital broadcasts using iBiquity Digital Corporation's HD Radio™ system, the station is in the process of converting to digital operation and plans to begin digital service in November 2004.

Duquesne University strongly supports the FCC's efforts to encourage and promote the adoption of digital radio in the United States. We are eager for final rules for digital service that will allow broadcasters and receiver manufacturers to develop technology and services that will maximize the usefulness of HD radio technology for the American public as a new evolution of free, accessible, over-the-air broadcasting.

As WDUQ is an FM broadcaster, we will focus our comments on issues surrounding FM digital radio and the need and opportunity for early success during the transition to the first stages of analog/digital transmission. Even in this "hybrid mode," the HD radio platform continues to evolve and improve to show us great opportunity for better service to listeners and local communities.

Lifting the curtain off of high frequency audio is a major improvement for FM service, allowing broadcasters to leave behind the dulling impact of the FM de-emphasis curve. Engineering professionals have made remarkable strides in working around the technical limitations of the current standards for FM stereo, but a significant constraint on fidelity remains. HD radio technology offers a notable improvement of service.

Multipath interference is another major fidelity problem for many listeners to analog FM. Multipath is especially a problem for listeners in Pittsburgh and throughout the surrounding rugged terrain of southwestern Pennsylvania. The HD radio solution for multipath should provide many listeners with a notably better sounding FM signal. Given the increased competition from satellite radio and recorded mobile media, this is a needed improvement.

The Commission's Further Notice asks questions about new datacasting and multicasting services that can be introduced using HD Radio technology:

### **Datacasting**

The robust use of ancillary data will allow broadcasters to provide listeners with valuable information, from basic song and artist information to facts and details about interview topics and guests, weather, travel and other information. The potential for uses of the expanded data capacity is remarkable, but it will take much work by broadcasters and receiver manufacturers to implement.

Using this data path will require a substantial investment in database management tools and process by local stations. To allow for the creation and maintenance of enhanced data services, we ask the Commission to allow for the use of expanded data as a part of the standard complement of features to be accessed by any broadcast station as an element of their license.

We also ask that the utility of datacasting services in the non-audio segment of the HD signal mask be allowed to provide special services such as radio reading services for the blind. In the hybrid as well as the full digital modes of transmission, an addressable datacast segment could be used to transmit a reading service through a station such as WDUQ-FM with fidelity and perceived signal strength greatly improved over what WDUQ is currently able to offer via subcarrier today.

### **Multicasting**

The now proven potential of HD Radio for Multicasting and Supplemental Audio offers a truly exciting opportunity for enhanced public service. Thanks to test results from the Tomorrow Radio Project as pioneered by National Public Radio, we are certain that the 96 Kb digital audio path for HD in the hybrid mode is robust enough to allow for more than one digitized audio channel. We ask the Commission to allow terrestrial radio to maximize the development of services and programmatic options this technology will allow.

For WDUQ-FM in Pittsburgh, we look forward to the potential of enhancing public service by offering increased access to our two main format streams of in-depth News and Jazz programming. While WDUQ serves more listeners than any other public radio station in Pittsburgh, our listeners have expressed a great interest in hearing more of both of our major programming formats. With no additional spectrum, the advent of multicasting through HD radio heralds a dramatic breakthrough in public service for our community, extending the breadth of our local and national public affairs coverage, while also solidifying access to the American art form of Jazz.

Additionally, while a high-quality main channel of digital broadcast should always be free to all listeners with a receiver, we would ask that the Commission allow for subscription or membership-based audio as a part of the available services for stations transmitting in HD. Non-Commercial Educational stations should be allowed to present such offerings for listeners/members, provided that the majority of HD audio content continues to reflect the non-commercial nature of the license.

The "store and forward" ability of future HD receivers to delay audio broadcasts should be allowed under current licenses, recognizing that content in other media is already easy to time-shift. HD receivers that have this sort of enhanced utility will greatly enhance the adoption rate of this new technology.

## **In Conclusion**

Terrestrial broadcasters have an obligation to serve the communities to which they are licensed. Multicasting and ancillary data services offer remarkable new opportunities to enhance local service with new kinds of content and features. The development of those new features and services should not be limited by regulations beyond the current high standards of service expected of broadcasters under the current FCC licensing structure.

HD radio faces constraints and limitations based on the realities of the marketplace, frequency scarcity and the way radio stations have been constructed, grown and changed over more than 80 years. But American broadcasters have always dealt with limits and constraints, building the world's most comprehensive terrestrial broadcast system by working with reality and maximizing opportunity.

Since the technology foundation for HD Radio allows for innovation, we ask the Commission to not just allow for innovation and market development but to encourage it with haste. By allowing broadcasters full flexibility within their current authorizations, broadcasters and receiver manufacturers will be able to create new and robust uses for their stations and the public now and into the future.

We ask for the ability to use the foundation of the digital HD mask to create and develop useful services without the need for additional approvals or authorizations beyond the final authorization requested through this rulemaking.

Respectfully Submitted,

Scott Hanley  
Director/General Manager  
WDUQ-FM  
Duquesne University  
Pittsburgh, PA 15282